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# GENERAL DYNAMICS

# Convair Division

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619 573-8000

Environmental Resources Management, MZ 88-2520

February 20, 1990

Mr. Daniel J. Avera, Chief County of San Diego Department of Health Services Environmental Health Services, Hazardous Materials Management Division P.O. Box 85261 San Diego, CA 92138-5261

Dear Mr. Avera,

This letter and the enclosed report is in response to the Notice of Violation dated January 12, 1990 re: Incident #89-583 / Acid Spill 12-31-89 / 3302 Pacific Highway-Bldg. #75.

General Dynamics Corporation denies that it has violated Section 67120 of the California Code of Regulations (CCR), Title 22, or any other statute, regulation or law. General Dynamics further denies that the current design and operation of the anodizing or coating processes in Building 75 does not preclude the loss of hazardous materials to the environment.

Notwithstanding the above denials, and solely in an effort to cooperate with your agency and to address the concerns raised by you in this N.O.V., we have taken steps to formulate and implement a comprehensive plan to respond to the above noted incident. The details of this plan, along with a summary of events to date is the subject of the enclosed report: Preliminary Site Assessment Report / Preliminary Hazard Assessment / Corrective Action Plan. This report is being submitted in agreement with dates referenced in your letter of January 12, 1990: February 20, 1990 for submission of a "written site assessment report" and March 1, 1990 for submission of a "preliminary hazard assessment."

General Dynamics Corporation has always taken appropriate steps to protect public health and safety and the environment in all aspects of General Dynamics' operations, and will continue to do so in the future. The above steps taken in this matter further illustrate that dedication to protection of the public health and environment. By providing the enclosed documents General

#### Convair Division

Environmental Resources Management, MZ 88-2520

Dynamics Corporation does not admit any wrongdoing, negligence or violations of any rules, regulations or statutes. General Dynamics Corporation maintains that it correctly handles hazardous materials at its facilities at all times, and did so in the present instance.

If you have any questions about the specific details of the enclosed report, please feel free to contact Mr. John Fields or Mr. Randy Venier of my staff. Mr. Fields may be reached at (619) 542-6215, and Mr. Venier may be reached at (619) 542-7079. Please direct any questions of a general nature, and all future correspondence concerning this incident to my attention.

Respectfully,

G. F. Hardacre

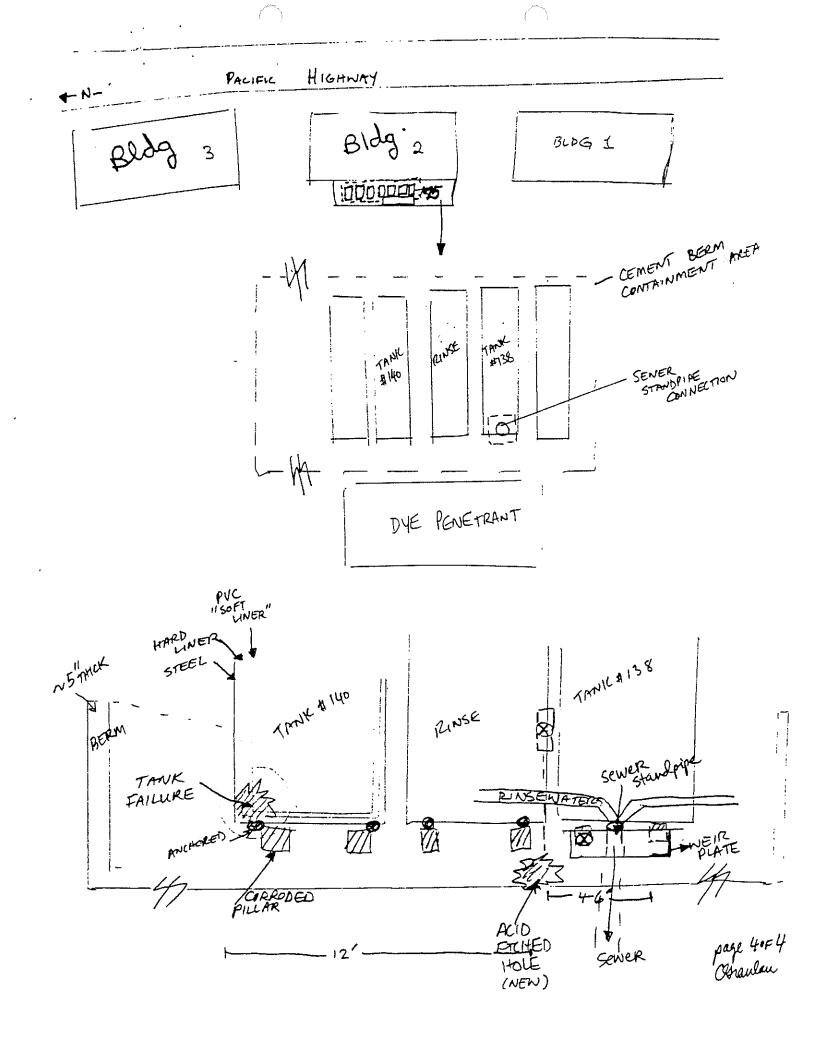
Manager

Environmental Resources Management.

cc: N. Riikonen, Metropolitan Industrial Waste Program

J. Munch, California Regional Water Quality Control Board

A. Rodewald - Convair



# Chemical Processing Tank Information Lindbergh Field Building 75 — Chemical Processing Line

Tank No.	Solution/Process	Chemical Makeup	Capacity (gal)	Operate (temp)	Column
125	Chromate/conversion coating, clear	Alodine 1500 & DI water	12,000	130-135°F	Y-6
126	Water rinse	DI water	12,000	Ambient	Y-6
127	Conversion coat for aluminum	Alodine 1200S, nitric acid & DI water	12,000	Ambient	Y-6
128	Chromic acid/anodize seal	Sodium dichromate & DI water	12,000	200-208°F	Y-7
129	Water rinse	DI water	13,600	Ambient	Y-7
130	Sulfuric acid/anodize seal	Sodium dichromate & DI water	13,500	200-210°F	Y-8
131	Sulfuric acid/anodize neutralizer	Sodium bicarbonate & DI water	13,500	Ambient	Y-8
132	Water rinse	Tap water	12,000	Ambient	Y-8
133	Sulfuric acid/anodize	Sulfuric acid & DI water	12,000	68-72°F	Y-9
134	Chromic acid/anodize dragout	Chromic acid anodize dragout	12,000	Ambient	Y-9
135	Water rinse	Tap water	12,000	Ambient	Y-9
136	Chromic acid/anodize	Chromic acid & DI water	11,700	90-95°F	Y-10
137	Water rinse	Tap water	12,000	Ambient	Y-10
138	Aluminum deoxidizer	Amchem 7/17, nitric acid & DI water	12,000	Ambient	Y-11
139	Water rinse	Tap water	12,000	Ambient	Y-11
140	Aluminum acid etch	Nitric & hydrofluoric acid & tap water	12,000	Ambient	Y-12
141	Water rinse	Tap water	12,000	Ambient	Y-12
142	Alkaline aluminum cleaner	Oakite 164 & tap water	13,500	150-180°F	Y-13
143	Aluminum alkaline cleaner, nonsilicated	Aldet I, sodium chromate, chromic acid & DI	13,500	145-160°F	Y-15
144	Hot acid stripper	Fosrinse CP/remover A-805	4,200	160-200F	Y-26
145	Stripper rinse	Tap water	4,200	Ambient	Y-25

GD INCIDENT - Notes by Christina Graulau

1-5-90 Dan Avera, Ben Franklin, Christina Graulau from HMMD met with Gerry Hardacre, John Fields and Randall Vernier of GD from approximately 2:00-3:30.

Onsite visit was to follow-up incident reported on 12-31-89. An aboveground storage tank(\$\square\$140) in plating processing area failed, causing a discharge of approximately 9-12K gal of Aluminum Acid Etch solution. Contents of this tank are approximately 70% nitric acid, 5% hydrofluoric acid, and 25% water. John Fields conducted most of the explanation of what is thought to have occurred.

John described the location of orginial buildings (1,2,3), built in 30's and the addition of building 75 in the late 50's. John stated the area had a major expansion approximately in '66 and addition modification (expansion of the tanks) in 1971. John assumed that the concrete spill containment area was at least as old as the 1950 addition.

John described a sewer connection under tank #138 and how rinse tanks and wastewater was independently plumbed for a separate discharge from wastewater that collected in the containment area. We were told that a weir plate had been fabricated to protect the sewer standpipe, and this wier plate had a ball-valve for servicing purposes.

John mentioned that just prior to this incident, GD had a meeting with the San Diego Pretreatment Program (Nancy Riikonen). GD had been issued directions to have the process area modified in order to protect the sewer connection. In addition, GD is having a wastewater pretreatment system installed to manage all industrial wastes discharging to sewer connections.

John explained that the containment area continually receives liquids from leaking connections and such. He stated that 5K gal of this liquid was removed and disposed of as hazardous waste on Friday Dec 29th. John stated that there was less than 5Kgal of this liquid still in the containment area. Routine analysis of this wastewater indicates that it typically contains less than 1000ppm of hexavalent chromium, trace amounts of cadmium and lead (from pigments in painted pieces) and the pH is 5-8. John stated that GD was regularly having problems with the chromium co-tent and in order to be in compliance with sewer discharge requirements, GD could not discharge this to sewer connection, so it is managed as hazardous waste.

John also mentioned that several months ago GD had a release of concentrated chromic acid in the area and there was a point in time during which the wastewater in the containment area had several thousand ppm of chromium, and this was still being cleaned out by dilution.

John explained the design of the process area as having anchored above-ground process tanks elevated on cement pillars. Tank #140 has a steel skeleton with a baked-on liner, holding a "soft-liner" (made of PVC), to protect tank from possible damage caused by parts in the bath. John stated that a new, "hard" PVC liner was installed over the christmas holidays and no leaks were observed. A representative from Flexiliner and a GD plumber inspected the liner. Since no leaks were observed, on Fri Dec 29th, the tank was charged with fresh acid solution. No processing had been done utilizing that tanks's contents.

John stated that a GD plumber first noticed the leaking process tank and had said it was "coming out like a waterfall". The internal notification occurred about 9:304 When John received the telephone call, he stated that he assumed the acid had filled the sump completely and got past the weir plate, therefore the contents were going to sewer. John stated that he called the emergency number for SD sewers, who in turn called the SD Fire, who in turn called HMMD.

John stated that Pacific Treatment was called out and was able to transfer 2-3K gal of alum etch out of the process tank. John stated that all the standing wastewater liquid previously in the containment area, and approximately 9K of aluminum etch had been lost.

John stated that on January 1 1990, Gerry Hardacre and Randy Venier had inspected the area and found a hole in the concrete floor of the containment area, approximately 12 feet from tank #140 and 4-6 feet from the standing sewer pipe connection. The assumption was that all the liquids lost had discharged at this point. The weir plate had been etched but there was no damage to the ball-valve in the weir plate and no sewer discharge occurred.

Since the incident, tank #140 was patched by having the soft and hard liners removed, with metal plates welded over the corner of the hole. We were told that nobody noticed that this process tank had developed corrosion in the corner. This is despite the fact that several wastewater sampling sessions and visual inspections were conducted by different people.

During our visit, we saw evidence of the repair on the process tank #140, and of a new cement patch in containment floor. There was a considerable amount of blue-green colored sludge within the containment area. We discussed how the design of the containment area was allowing liquids containing hazardous materials to be stored. John admitted that he knew this was improper, but currently unavoidable. John and Gerry admitted that the entire process area should be redesigned.

Gerry explained that GD had already made arrangements to accept bids from 5 consulting companies for site assessment/mitigation reports. He stated that within 1 week GD would have a contract for such work to begin. He estimated that within afew weeks, a

preliminary assessment would be available.

Dan Avera questioned Gerry on how GD was going to preclude this from occurring again. Dan left a copy of the RMPP guidance document with Gerry. Gerry stated that the dye penetrant tank is to be relocated so that there is better access to process tanks. John stated that if the facility had another spill they would empty a lined rinse tank and pump contents of a spill into that tank.

Prior to leaving, Dan stated that HMMD would be sending a letter to direct GD to submit and SA/M report and additional requests for emergency preparedness, design improvement. When asked if the OES had been notified, John stated that he was not sure.

Dan expressed a concern that the hole in the concrete containment area was close to the sewer piping and expected the spill may have followed the sewer line. We also discussed the possibility that this incident was a violation of the Clean Water Act. The case has been assigned to Darryl Fowler, under Larry Bodenhammer.

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# GENERAL DYNAMICS Convair Division

Lindbergh Field Plant 3302 Pacific Highway San Diego, California

# Preliminary Site Assessment Report

Preliminary Hazard Assessment / Corrective Action Plan

February 20, 1990

Acid Spill 12-31-89 / Building #75

Incident #89-583

Convair Division
Environmental Resources Management, MZ 88-2520

### BACKGROUND

The following account summarizes the incidents and actions to date associated with the release of acidic processing solution from General Dynamics Convair Division's Lindbergh Field Plant #01, 3302 Pacific Highway, San Diego, California.

### Chronology of Events

On 12/31/89, routine inspection of the chemical processing line in Building 75 at the Lindbergh Field Plant (LFP) by Convair Maintenance personnel revealed a leak of "Aluminum Acid Etch" solution from Tank #140. This metal finishing bath is an aqueous solution comprised of 70-75% by volume concentrated nitric acid (HNO3) mixed with 2-5% hydrofluoric acid (HF). Initial assessment of the situation was that approximately 10,000 gallons of solution had leaked from its nominal 15,000-gallon tank and flowed into a concrete sump underlying the entire process line in Building 75. The concrete sump was intended to serve as a secondary containment structure for incidental spills or leaks from the processing area and had some 2 months earlier contained a leak of chromic acid anodizing solution. As such, the concrete sump was contaminated with dilute chromic acid (estimated concentration equivalent to 500 - 800 ppm as Cr<sup>6+</sup>) at the time of the leak of aluminum acid etch solution.

Sometime shortly after being detected leaking from Tank #140, the aluminum acid etch solution corroded an area of the concrete sump, forming a hole approximately 12" in diameter in the 6-8"-thick concrete and allowing approximately 15,000 gallons of acidic liquid to flow out of the sump and into subsurface soils beneath the floor of Building 75. The 15,000 gallons is estimated to have been made up of 10,000 gallons of aluminum acid etch solution plus 5,000 gallons of dilute chromic acid solution. Emergency measures by Convair Maintenance personnel resulted in approximately 2,000 gallons of aluminum acid etch solution being captured while still in Tank #140. This solution was transferred by vacuum tanker truck out of the damaged Tank #140 and transported off-site for stabilization and landfill disposal.

Preliminary investigation of the cause of the leak indicates that the outer carbon steel wall of Tank #140 structurally failed, allowing an internal 'Hypalon' liner and a flexible plastic bladder liner to also fail due to the static pressure caused by the weight of the etch solution within Tank #140.

#### Release Reporting

The initial assessment of the release was completed during the morning of 12/31/89, before the 12" hole had been located in the concrete containment sump. Accordingly, it was believed that the

Rev. 2/19/90 Page 1 of 7

Convair Division
Environmental Resources Management, MZ 88-2520

15,000 gallons of solution had been lost from the containment sump through an existing permitted discharge point to the San Diego sewer system. Late on the morning of 12/31/89, the City of San Diego Water Utilities Department was notified that 15,000 gallons had been discharged through Connection 210 at LFP. The City operator notified personnel from the Point Loma Treatment Plant, and from the City of San Diego Fire Department. Fire Department Captain Lee subsequently notified the San Diego County Department of Health Services, Hazardous Materials Management Division.

On the following morning, 1/1/90, a detailed survey of the area revealed the presence of the hole in the concrete containment sump. At this time, the estimated release of 10,000 gallons of solution containing 75% by volume concentrated nitric acid (67% by weight HNO3) triggered release notification by Convair to the following agencies: U.S. Coast Guard, U.S. EPA (Region IX), National Response Center, Washington, D.C., California Office of Emergency Services, California Regional Water Quality Control Board, and the California Department of Fish and Game. Equipment A

**CURRENT STATUS** 

Tank 140

Wank 140 was put back into use by Convair Production during the week of January 9,1990 and the chemical processing lines in Building 75 have been used on a 6-day, 24-hour schedule since that time. Prior to being put into service, Tank 140 was repaired. The outer steel tank was reinforced and repaired with 0.125" steel plate at the point of structural failure and areas immediately surrounding this point. The Hypalon liner was replaced with a new liner. Finally, the entire tank was visually inspected and leak tested prior to recharging with fresh Aluminum Acid Etch solution.

# Hazardous Materials Release

In order to assess the fate of the acid and chromated water released from the Building 75 sump, Convair initiated an engineering effort during the week of January 2, 1990 that involved soliciting the professional services of independent consulting engineering firms. Following a comprehensive review of technical proposals, Convair awarded a contract for Site Assessment on January 19, 1990 to CH2M Hill Engineers, Santa Ana, California. The details of this contract and CH2M Hill's planned activities appears in the following section.

Rev. 2/19/90 Page 2 of 7

# Convair Division Environmental Resources Management, MZ 88-2520

Until preliminary results are available from CH2M Hill's efforts, it is not possible to quantify either the nature nor the extent of any environmental contamination resulting from this hazardous materials release.

### CORRECTIVE ACTIONS

#### Site Assessment

As indicated, CH2M Hill Engineers is currently under contract to the Convair Division for site assessment work. The project manager for CH2M Hill is Mr. Kirk Thomson, Senior Hydrologist, (714) 250-5500. Mr. Thomson is the focal point for all of CH2M Hill's efforts on behalf of Convair and, as such, is available to answer questions generated both internally at Convair and those generated externally by regulatory agencies involved in mitigating any effects of the acid release from Building 75. As a first item of work, CH2M Hill has prepared a Final Draft "Sampling and Analysis Plan" (SAP) and a Final Draft "Safety and Health Plan" (SHP) that outlines in detail the methods, the approach, and the protocol to be followed in executing an initial environmental site assessment for this incident. Under verbal agreement between Convair and HMMD's Site Assessment and Mitigation Program, a copy of these documents was hand delivered to Mr. Darryl Fowler on Wednesday, February 14, 1990. A copy of the documents was also hand delivered on that date to Mr. Jim Munch of the California Regional Water Quality Control Board in San Diego.

# Scope of Work

The site assessment effort associated with this release will proceed along two lines, one which involves the placement of shallow groundwater monitoring probes in order to field assess limits of potential contamination and another which involves the installation of fiberglass-cased groundwater monitoring wells for more permanent monitoring efforts. As of the date of this report, the scope of work planned for site assessment is limited to that described in CH2M Hill's SAP and SHP. These Final Draft plans are included as an attachment to this report.

### Planned Meetings

In order to receive adequate and timely comment from applicable regulatory agencies, two preliminary meetings are scheduled with all parties. The first meeting will occur on Wednesday, February 21, 1990 at Convair's Lindbergh Field Plant. The purpose of this meeting will be to

Rev. 2/19/90 Page 3 of 7

# Convair Division

Environmental Resources Management, MZ 88-2520

review HMMD's and RWQCB's comments of CH2M Hill's SAP and HSP and to finalize details for commencement of probe installation and well drilling.

A second meeting will be held following completion of CH2M Hill's preliminary investigation, which at this time is scheduled to occur 15 weeks from the issuance of the site assessment contract. Accordingly, this second regulatory review meeting is planned for early May, 1990.

# Site Remediation

Based upon the results of the site assessment now being conducted by Convair, and based upon appropriate regulatory comment and guidance, subsurface contamination to groundwater and/or to soil will be removed or lessened. Such site mitigation measures cannot at this time even be speculated upon, but the final task associated with CH2M Hill's services to Convair will be the recommendation of strategies and techniques for such work.

# Risk Management & Prevention Plan

As an element of Convair's response to the release from Tank 140, the Lindbergh Field Plan will be subjected to a comprehensive audit in accordance with guidelines established for the preparation of a "Risk Management & Prevention Plan" (RMPP). This Plan will be completed by January 5, 1991 and will encompass both potential changes to equipment and facilities as well as changes to operating processes and procedures.

# Facility Refurbishment

Regardless of the outcome of the RMPP, the Convair division is committed to immediately begin implementation of a series of corrective actions to the facilities associated with chemical processing in Building 75. As an adjunct to the explanations provided below, the refurbishment of Convair's chemical processing facility in Building 75 is represented by the project timeline chart shown in Figure 1 at the end of this report.

The chemical processing area in Building 75 at Lindbergh Field consists of 19 tanks, each approximately 15,000 gallons total capacity, of which approximately 12,000 gallons is utilized as a working volume for metal finishing processes that include sulfuric acid anodizing, chromic acid anodizing, and chemical conversion coating ('Chem Film'). The original chemical processing line was installed at Lindbergh Field in the late 1950s, upgraded and expanded substantially in about 1970, and then again in the mid 1970s. Since that time no additions in size or capacity have been

Rev. 2/19/90

#### Convair Division

Environmental Resources Management, MZ 88-2520

made, though ongoing maintenance and repair of the tanks, liners, support stanchions, and foundations continues on an as-needed basis.

With the award of a major contract from McDonnel Douglas Corporation in 1988 to the Convair Division for supply of mid-body fuselage sections for the MD-11 commercial aircraft line, the continued use of the Building 75 processing facilities is assured well into the 1990s. Accordingly, a comprehensive plan has been developed for rehabilitation and refurbishment of these chemical processing facilities in Building 75 at Lindbergh Field.

In general terms, the following elements make up the key tasks associated with refurbishment of the Building 75 chemical processing facilities at Lindbergh Field.

### Dye Penetrant Equipment Removal

The 19 tanks, associated plumbing, and concrete sump structure that comprise the Building 75 processing facility are located immediately adjacent to a conveyorized dye penetrant inspection station used for visual inspection of machined aluminum parts. This conveyorized equipment is approximately 100' feet long and effectively blocks access to the chemical processing line from the west. On the east side of the processing line lies the former outside structural wall of Building 2 which acts as another barrier to useful access to the area. Therefore, in order for any worthwhile refurbishment to take place, the dye penetrant equipment must first be removed. Currently, a new dye penetrant process is being installed elsewhere in the plant. Once the new process is operational, the existing dye penetrant equipment will be removed, freeing access to the chemical processing line.

The estimated completion date for this task, REMOVE DYE PENETRANT LINE, is 4/11/90.

#### Plumbing Line Repairs

As noted, the chemical processing facility in Building 75 dates to the late 1950s. As would be expected, the overall plumbing system, including fresh water inlet lines and process rinsewater drain lines, is in a general state indicative of its age. Commencing immediately, Convair will undertake a comprehensive program to repair and/or replace as needed all such plumbing systems associated with the Building 75 facilities. In the short term, this task will be greatly complicated by the poor access afforded by the existing layout of the area. Once the dye penetrant line is removed, the repairs will be finalized. The net result of these actions will be a concrete sump free of water, i.e., a "dry sump."

The estimated completion date for this task, REPAIR PROCESS LINE LEAKS, is 5/9/90.

Rev. 2/19/90 Page 5 of 7

# Convair Division Environmental Resources Management, MZ 88-2520

## Secondary Containment Sump

With the removal of the dye penetrant line and the repair of all plumbing systems within the processing area, the concrete containment sump that underlies the entire chemical processing line will be accessible for the purposes of cleaning and inspection. Convair has attempted to clean the sump thoroughly as recently as late 1988, but the access problems caused by the dye penetrant line prevented a complete job from being done. In this case, however, the improved access will allow Convair, with the aid of a certified hazardous waste contractor, to perform a complete cleaning job. Current plans call for the use of high pressure water spray used in connection with manual scraping and shovelling to remove any solid residues that would obscure the surface of the concrete. Once this is completed, the concrete containment structure as a whole will be thoroughly inspected, using geotechnical instrumentation as applicable (eg., ground penetrating radar).

The estimated completion date for this task, CLEAN AND INSPECT SUMP, is 5/31/90.

Finally, should inspection of the concrete structures indicate the need for repairs, these will be completed also. Repairs of any scope at all can be quite involved from a construction standpoint and it is difficult to estimate the scheduled completion for such a task. However, an initial estimate is that sump repairs, if required, can be completed by the end of August, 1990.

#### Industrial Sewer Relocation

Under current conditions, rinsewaters from the Building 75 chemical processing operations are piped directly to a standpipe located within the boundaries of the concrete containment sump. Prudent design of this chemical processing facility would dictate that all drains to the municipal sewer system occur outside of any secondary containment structure. Accordingly, the existing arrangement will be changed, with the net effect being that a new discharge connection to the municipal sewer system is created outside of the secondary containment sump in Building 75.

The estimated completion date for this task, RELOCATE SEWER DISCHARGE, is 7/16/90.

### Tank Inspections

The age of the tanks used to contain chemical processing solutions for sulfuric acid anodize, chromic acid anodize, and chemical conversion coating operations is such that a thorough program of tank inspection must be undertaken. As a first component of repairing or replacing the tanks themselves, Convair will complete an exhaustive program of visual and instrumental inspection for

Rev. 2/19/90 Page 6 of 7

# Convair Division Environmental Resources Management, MZ 88-2520

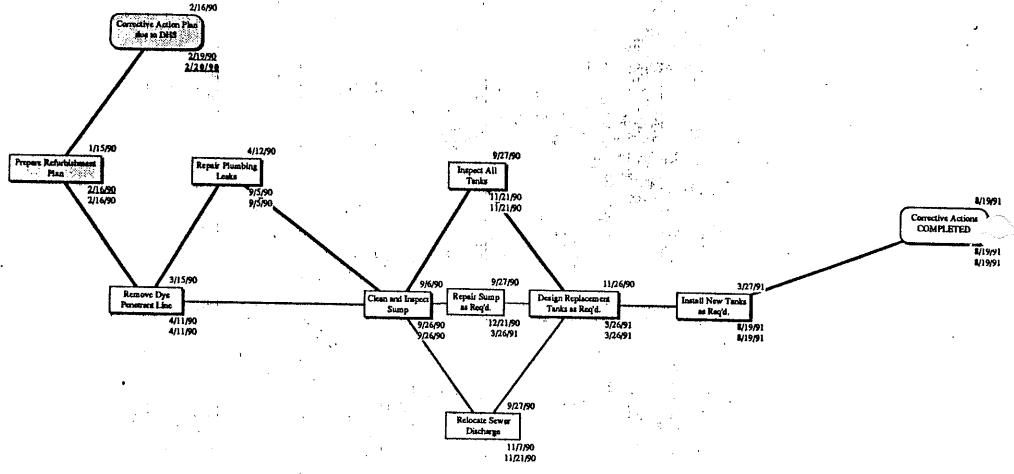
each of the 19 tanks in Building 75. At the conclusion of the inspection program, a determination will be made of the structural integrity of each tank. Then, according to the intended use, all tanks determined to be in need of repair or replacement will be scheduled for such. High priority will be placed upon tanks containing concentrated metal-bearing solutions or tanks containing corrosive liquids.

This inspection program will be carried out concurrent with the relocation of the industrial sewer discharge connection. Accordingly, the estimated completion date for this task, INSPECT ALL TANKS, is 7/30/90.

## Tank Replacements

Based upon the schedule of repair / replacement, funding will be allocated for new capital purchases. Following design and fabrication, new tanks will be installed in Building 75, completing this phase of rehabilitation. Because of the uncertainty at this point of which tanks, if any, will require repair or replacement, scheduled completion dates are very hard to predict. However, an initial estimate would be that all replacement or repairs, if required, will be completed by May, 1991.

Rev. 2/19/90



Lindbergh Field Building 75 Corrective Action Plan
Facility Refurbishment
PROJECT TASKS & SCHEDULE

Actual Start
TASK DESCRIPTION

Actual Finish
Latest Finish

The date is July 19, 1990, the time is approximately 9:00 a.m. We are present in the interview room, conference room. Present during this interview is Steven WADE, Attorney's Bill GRAUER and Robert LYNN. Also present during the interview are Investigators Bill R. KREDER and John CLARK.

KREDER: Mr. GRAUER, you are aware that this conversation is

being tape recorded. Is that correct?

GRAUER: Yes sir.

KREDER: And that's the same with, is that right Mr. WADE?

WADE: Yes. Fine.

KREDER: Alright we're back on tape.

CLARK: Uhm Mr. WADE why don't we start off with just getting a

little background on yourself. Can you give us your

full name?

WADE: My name is Steven Dwight WADE.

CLARK: Okay, and your position?

WADE: I'm a quality engineer. I work in Process Control.

CLARK: And that's with the uh . . .

WADE: General Dynamics Convair Division.

CLARK: Okay. Here in San Diego?

WADE: Here in San Diego at Conbrig Field.

CLARK: In Process Control, what's the description of your

duties?

WADE: One of my duties is as Process Control Engineer

where I insure the chemical process tanks are within the minimum and maximum specification ranges for our

anodizing and aladining other types of chemical

processing for coating aircraft hardware.

CLARK: And those chemical processing, that area there, do they

do defense work as well as the commercial work?

WADE: Yes.

CLARK: What types of mill standards, mill specks do those

tanks have to compile with in terms of doing the

military type work or DOD work?

WADE: Most of the, we basically, at, for most of the

processed tanks, we have tailored specks which we work to which are basically tailored from the mill specks where we have a little bit of the deviations from the lets say actual mill speck requirements, but in essence

they meet the same requirements.

CLARK: And we want to focus now on the spill incident out

there, was it the 31st of '89, December 31, 1989?

WADE: Yes.

CLARK: Could you talk about that a little bit, how that all

came about?

WADE: I was the engineer. Basically this tank has to be

cleaned out on an annual basis . . .

CLARK: Tank 140?

WADE: Tank 140, it's aluminum acid etch tank, and in the

process of etching aluminum parts, it builds up aluminum fluoride precipitate which if it was not disposed of and recharged on an annual or semi-annual basis, it will build up to so many feet where we can't lower the actual parts into the tank. So as part of normal processing, we schedule in this particular case, over the Christmas holidays, to have a contractor come in which disposed of the acid, theytrohydrocloric acid waste and had another contractor come in to basically remove the aluminum fluoride precipitate so we, and

then . . .

KREDER: Whose responsibility is it for contacting these

haulers? Who does that?

WADE: The Plant Services Department carried out that part of

the responsibility.

KREDER: Is that upon your request?

WADE: I made the initial process correction to have the tank

dumped and recharged over the Christmas holidays.

CLARK: In other words, the tank was getting to a point where

the precipitated built up and it was not going to meet

the specifications requirements for Process Control or

WADE: Uh it was more of a, it still was in speck but what would happen is you wouldn't be able to fit the baskets completely in and you could have a case where parts would end up sticking out and not completely the larger parts not completely being etched, which you know does not meet the quality requirements.

KREDER: Do you do that on a routine basis or do you do that just because the depth of the precipitate is too high, the level is too high?

WADE: Normally, the longest the tank has actually lasted is about a year and a half, two years, and with the increase in production, we're going to have to be doing it on an annual basis because of the depth of the aluminum fluoride precipitate.

KREDER: So you're saying that that tank just routinely is purged on an annual, once a year basis, even if this stepped up production?

WADE: Yes.

KREDER: Okay.

WADE: Uh we've had uhm several cases, although in the past where the liner has collapsed and where that would necessitate in essence almost emergency, let's fix the liner so we don't have somebody puncture the inner ladder which protects the outer steel.

CLARK: Why don't we talk about the tank for a minute and explain how the tank is set out. I mean, you got a steel tank I presume?

WADE: Yes. We have a carbon steel tank which has a uh cloriseal spray on or a coating which then has a soft PVC bladder and then it's rounded by a hard PBC panels to try and protect the soft PVC from any puncture . . .

KREDER: By the parts?

WADE: By the parts, or baskets that you don't . . .

CLARK: How much, what's the volume of these tanks, what do they hold, content (Unintelligible)?

WADE: Uhm it's approximately, I think it's a little bit over 12,000 gallons, I would have to look at my speck to get the . . .

KREDER: Tank 140?

WADE: Tank 140, like 12 or 13, I would have to look at the MOS that I worked to . . .

KREDER: How old is this tank, do you know?

WADE: Uhm, it's pretty old. I do not know exact age to be truthful. I know it's probably over 20 years old.

CLARK: And uh prior to the time that this spill incident occurred, what kind of condition was the metal tank in, the steel structure, the outer exterior, a portion of it? I presume that you see this on a daily basis or?

WADE: Uh, I would see the upper part almost on a daily basis.

I would go and look at the sub area maybe on a weekly basis.

CLARK: Is that part of your duties to inspect the tank area?

WADE: Not, I would inspect the sump. Might try to insure that we minimize leaks and other things.

CLARK: Now the sump, now that we're on that topic, that's the area just below the tank?

WADE: That's the area (Unintelligible) surrounding the tanks.

CLARK: And what is that constructed of?

WADE: Uh, it's basically a concrete structure that both supports that tanks and basically any liquids that basically drip down as part of the processing it contains with the volume . . .

CLARK: Is it a large sump or is it a, how much volume will that hold?

WADE: We've had a, after I think one spill we had actually filled the sump we had approximately 40,000 gallons I, that's the figure I heard.

KREDER: Is it routine for, during the processing, for liquids to collect in the sump area?

WADE: Yes.

KREDER: How much?

WADE: Uh they have actually built up uh in the past, you know, where we have 1,000 of gallons before they actually get tanker trucks to haul the material away as hazardous waste or treated on our on-site facility.

CLARK: How often does that happen?

CLARK: In other words, is the routine process to process the work there have these spills or leaks whatever and then wait til it reachs a certain level before you remove

WADE: After a spill, we normally try to get the material out as quick as possible, in some cases because of the treatment facility being all the Baker tanks that we have for on-site storage for the treatment facility being full they tell me sometimes they have to allow it to sit for a period of time.

KREDER: Who's they?

WADE: Plant Service people personnel.

KREDER: How would that be?

WADE: That would be the environmental resource people, as well as the maintenance . . .

KREDER: Specifically?

WADE: Uh John Fields and Bill Carpenter are the two main inner faces that I deal with.

KREDER: Has that happened in the past, that you've notified John Fields that there's some area needs to be drained and the Baker tanks are full and you have to wait a period of time to service those sump areas?

WADE: Or they end up waiting a period of time, I basically . . .

KREDER: What's the period of time that has happened in the past that those sumps have had to remain in that condition?

WADE: Uh, I think we've had some cases where it be as a week or so with a concentrated material being in the sump. We've had longer periods where due to condensate leaks or from like scrubber leaks and other things where we have a build up of chromia materials there that aren't concentrated like a actual spill but they are above suitable discharge limit of 2.77 BPM Chromium or milli parts per meter.

CLARK: In terms of that sump area, is it normally maintained in a dry state?

WADE: We've, ever since I've been there, never been able to maintain it in a dry state. I've been with the company 5½ years. We've made a lot progress towards, one of the goals is to have that sump be a dry thing. When I came here approximately 5 years ago, I discovered that we had over 100, I think it was like 150 - 200 gallons per minute that was entering the sump, and obviously now we've cut it down to less than 500 gallons per day going into the sump. So we've made a lot of progress but we haven't completely got . . .

CLARK: Well lets talk about the sump area itself now. Backing up to the spill, it's my understanding that there was a hole that the material that spilled out on the 31st was to believe to have entered, is that correct?

WADE: There was a hole where the acid entered into the I guess the sub-soil or level . . .

CLARK: Do you know how that hole became there or where it came from or?

WADE: No. I know that it was like on the, I think it was December 3rd, excuse me, December 21st, December 22nd I had a, I noticed that I had a process correction previously to pump the north sump which basically was clean water, you know, out, and I think at that time period . . .

CLARK: How was that material handled, was that . . .?

WADE: That was suppose to, because of the chrome level, was less than 2.77, I had a process correction to be able sewer it and that was not done. The material from the, I asked them to do the north sump and apparently the pumped the south sump liquid, which was chromiated into the middle sump. I'll further delineate like term north, south, and middle in a few minutes if you want. They apparently pumped the south sump area into the middle sump and as a result the middle sump was filled at that time when it really shouldn't have been. So, at that time period, I know we didn't have a whole, otherwise we wouldn't have liquid in the middle sump. I do not know, per se, I know the acid, after it leaked out of the Tank 140, etched the berm area where it leaked out onto the part of the, so it could eat the actual concrete, you know, hazard property in that area adjoining Tank 138 is almost the lowest spot in the sump, so it would puddle there and the hydrofluoric acid in the nitric hydrofluoric acid mixture that leaked does have a proper being able to eat both rock and obvious concrete. I don't know if it would eat

through how many inches of concrete there. As part of our company's investigation, they've asked, you know, I guess there was a object there I noticed there was like a T shaped thing, I didn't recognize it as a hammer because I didn't go physically touch it. I basically was using a flashlight when I actually discovered the actual hole, I didn't have very good lighting at that particular point on the discovered the actual hole it was on the 31st I believe.

KREDER: How much was in that sump on the 30th?

WADE: I do not know because I did not observe the sump on the 30th?

KREDER: Well how about prior to the 31st? When was the last time you had observed the level of the sump?

WADE: It was either the 21st or 22nd I actually observed the level of sump and it was had I estimated 5,000 - 6,000 gallons of material in it.

KREDER: And what do you think that material consisted of?

WADE: It was uh chromiate who had probably several hundred PBM chrome . . .

CLARK: And was that to be trucked away as hazardous waste?

WADE: It would be normally trucked away as hazardous waste.

KREDER: That was on the 21st?

WADE: It was 21st, 22nd, I'm not positive which day.

CLARK: And how did that stuff come into being in the sump?

WADE: As part of the, that material arises due to various leaks, drag out when you have a process loads that go from tank to tank, there is some material that actually falls down in between it and is actually mixed with any tap water or other chromiate leaks. For example, we have chromiate leaks from the scrubbers that enter into the sump, Tank 138, excuse Tank 130, Tank 128 being to the contributors.

KREDER: Is it normal for plumbing pipes to leak and stuff?

WADE: I put maintenance work orders in uh on numerous occasions to try and get these leaks fixed, and they have been in the process of fixing it, but that's, you know, maintenance that's has that responsibility. I

also brought it to environmental resource management, you know, in order to reduce the amount of material that we truck away, you know, instead having all this diluted waste, you know, they could have small amount of concentrated waste by having fixing a lot of these leaks, especially the tap water leaks and . . .

KREDER: And what kind of response do you get from environmental management and maintenance?

WADE: The environmental management because it comes out, they have to report to corporate basis on how much they haul away, you know, they were concerned and I actually made a report, I think it was October, November time period of '89, you know, outlining, you know, these are the leaks, this is the condition that we have over in the sump area.

CLARK: And what was done about all those leaks, have they been corrected?

WADE: Uh to date, they have not completely been corrected.

KREDER: Do you know why?

WADE: I do not know why. I uh . . .

KREDER: How many times have you notified maintenance or who specifically have you notified about this?

WADE: I put MWO's in which are basically, excuse me, those are maintenance work orders and that you basically are tracked in that the tanks over in Building 75 are key equipment there tracked and . . .

KREDER: Have you gotten a response from management as to why they're not repaired?

WADE: No I have not.

KREDER: Have you dealt with anyone specifically to fix these leaks?

WADE: I've dealt with Mike Rangling reminding him, as well as dealt with Keith DeArmond, as well as uh Jerry Hardaker, you know, where I outlined, you know, in the report of, "Hey uh these are the leaks are causing your waste disposal goals that they way above the corporate goals."

CLARK: Let me draw your attention to a note that in some of the records we'd subpoenaed some records I'm not sure

if you're aware of that or not?

WADE: Right.

CLARK: And they provided them. I believe some of this is your I don't know if you've seen this one here. It's Document #999 (Unintelligible voice) okay. Right

here. Have you seen this before?

WADE: Uhm.

CLARK: It's a excerpt from a report that was done.

Was this the Safety's Report? LYNN:

CLARK: Yes I believe it is.

WADE: Yes I provided that to our legal people as part of the subpoenaed items. I was one that brought it to

Safety's attention uhm of several items.

CLARK: Okay, if you look down here where it says finding processing wine spills often occur at frequencies of once per week, these tanks have an extreme limited sump capacity that previously overflowed into the City's drain system and some clean out are costly. Do you

know who wrote this?

WADE: That was Safety's uhm report, I'm not sure who was the actual author. I know Ann Burton, the industrial hygienist, was involved in at least preparing some of the findings. I'm not sure who the actual author of that report was. I know she was one of the contacts I

had.

CLARK: And in relationship to that, what I just read, do you

believe that's an accurate statement?

WADE: I do not know that was first written several years ago

I believe in 1987. CLARK:

WADE: I do not know if the weekly statement there is

accurate. I know it's a lot more frequently than I

wish would . .

KREDER: Was it more frequent than weekly?

I don't think, I think weekly is . . . WADE:

KREDER: Bi-weekly.

WADE: I think at that time we had quite a incidents where it

maybe was occurring monthly, but weekly I think would

have been uh . . .

CLARK: Underneath the recommendations, it says supply

processing why would some sensors detect overflow indicating PH and chrome levels. Do you know if that

was done?

WADE: No. And that was one of my recommendations. I

actually outlined a piece of equipment that they could have probably bought for about \$12,000.00 and I . . .

KREDER: Who did you outline that to specifically?

WADE: Uh yes. I outlined that to Al Skiles who was at that

time the environmental resource manager for Convair, and I think I also talked to Dick Leonard, but being that they had limited capital money, that never was

implemented.

KREDER: Okay, in that same report, there's reference that the

materials uh will spill to the City drain system. Can

you be more specific as to the City drain systems?

WADE: Okay, there is a drain that goes to the City sewer

that's located underneath Tank 138 on the west end

where the race waters are normally piped to.

Unfortunately, this drain which is underneath Tank 138 has a limited berm around it, and if the sump level's up, the berm is limited in size that protects the Tank 138 drain, and it actually in the past has overflowed

the sump into the Tank 138 sewer drain where we

actually had a violation of our sewer permit, which you

know, in several cases, had to be reported to the City.

KREDER: And was it?

WADE: To my knowledge yes. I normally, although report

directly to the environmental resources which then, you

know, does the reporting to the City and other

government agencies as required.

CLARK: I have another handwritten note here maybe you can take

a look at this one. This is on Page 001004 document.

WADE: I do not know what that number represents.

CLARK: That's a copying number of (Unintelligible)

KREDER: Just a control number that's all that is.

CLARK: A control number so it in reference it later on.

Looking at this, does this look familiar?

WADE: That's my handwriting there, yes.

CLARK: If you could read this out loud for us?

WADE: When north sump is plunged during a spill clean up, the steam tunnel fills with contaminated water which could inadvertently discharge through the sewer storm drain. This is due to a hole in the sump where a DI pipe enters the steam tunnel through some floor near the east wall by Tank 142 and Tank 143. Also need to patch 3 or more holes in the sump east wall near Tanks 143,

Tank 139, and Tank 138. And then I have a parenthysis (plentum tap water valves to drain if overflow). Then further down here Tank 133, cooling lines not contained they could enter Building 2. Tank 140's stand off about to fall off. Tank 144 and drinking fountain removal? Building 75 sump needs better containment sump monitoring device. Steam returned monitoring device. This was written I believe back in 1987 time period if I'm correct, and this was in my opinion true. Several of the items where we talk about the holes in the actual sump floor have been fixed. We had a case,

I believe it was in 1987 maybe 1986, where we actually had the sump filled and as a result of it being filled and having some holes that went to the steam tunnel where we had a discharge that had to be reported both to the City, and I think there was also a storm drain

to the sewer directly or the, worse yet, you know, the

that was involved at that point where it . . .

CLARK: Well in looking at this it mentions a hole in the DI.

It says here, this is due to a hole in the sump where

the DI pipe . . . what is a DI pipe?

WADE: Deionized is the water pipe. I was referring to a pipe that was going through the concrete substructure and unfortunately they had the pipe with about inch gap, so if the sump was filled up which in that one particular case it did, we ended up having chrome from the sump enter into the steam tunnel which then could discharge

storm drain system.

KREDER: Have you seen that happen?

WADE: Back in 1987 it did happen. We had to report that.
Since then, because of that incident, they did process

a MWO which I told them to repair those items.

CLARK: And did they repair those items?

WADE: They repaired the hole that was in there. There was several couple items there I think they still have not

. . .

CLARK: This last spill incident when that occurred, did the water from your investigation when you were there, did the water follow that same path of the fluid that came

out of that sump area?

LYNN: December 31?

WADE:

This is be my supposition, I don't know in that, when I was, well, part of it is my supposition. When I came to same on December 31st, I came actually, let me back track, I came to the scene as a result of two items. got two phone calls that morning. One was the, and I believe the first one was maintenance department or processing people I didn't unfortunately get a name of I believe it was who was actually giving me a call. possibly one of the people in production or our processing people that came in, although that's just my feeling, I don't really uh now that person's name where they indicated we had a leak in Tank 140, and most of the material was gone from that tank. About shortly after that, I believe, I'm not positive which came first, I believe it was they called Hector Camacho called me from the chemical lab. I had a tank sample that I had taken on the December 30th of that tank. I took a sample of that tank in order to on the generally second be able to place the tank back in service, and as part of my duties, I try to verify that the tank contents meet the specification requirements where I actually took a sample December 30th in the evening and he called me December 31st and gave me those results as well as several other ones. One of the things on Tank 140's results the acid levels were actually below spec, quite a bit low below specification, and I basically came into the, you know, company after I ended up not taking a shower and other things. I came here practically within the half hour of receiving those two calls and, the first item I basically came and looked for the maintenance people that gave me the other call. I believe I talked to Mike Prayling, you know, to try to ascertain what was going on, and as I believe as a result of my conversations, that they, you know, said that the sump was empty which struck END OF SIDE ONE OF TAPE.

KREDER: Tape ran out, we are back on tape.

CLARK: So you were saying the sump uhm, you came in and you talked to Mike Crayling and you said that the sump wa

talked to Mike Crayling and you said that the sump was

empty?

WADE: I believe he said the sump was empty. Somebody

triggered me. We had the leak and my supposition would be that we should have a sump filled with this acid material and they said ah, the sump is empty and there was a little bit of confusion on our people's part on whether somebody in part of the clean up where they tanked out or what. I went and started looking at the sump. That seems strange. Why is it empty, so I went and walked back behind, we at that particular time had a dipenatrant system, so they, I had to walk behind the, I made a dipenatrant system which we call Abbreviate Alps and in between the tanks and the stuff

Abbreviate Alps and in between the tanks and the stuff on the berm. When I walked back, I did observe that the sump was empty. We had where the Tank 140 still was had a material that was coming out of the tank at that time from the west, I think it was more of the northwest corner of the tank, there was material

spilling out and was running past that tank.

CLARK: You observed holes in the tank.

WADE: I observed the middle eaten away and it was liquid

coming out of that tank at that particular time. I went back to maintenance people who then provided me with a flashlight because at that time I didn't have a flashlight, and I believe I also got some PH paper because I was trying to PH strips to verify where is

the acid . . .

KREDER: And what was the PH?

WADE: The PH at that time was a little bit above PH 5 which

shocked me because here I'm observing this liquid coming out of the tank and I assumed at that particular time that it should be, you know, my acid's still

flowing out of the tank, and I got a PH above 5, you

know between 5 and 7 along the . . .

KREDER: In the sump?

WADE: In the sump.

KREDER: What do you feel the reason for that was?

WADE: The reason I learned later was that maintenance had

gone and neutralized the material that was in the remaining rain, the material that was in the tank.

UNKNOWN: (Unintelligible) with?

WADE: Sodium Bicarbonate is what I was told.

KREDER: Is that a standard procedure that they, how did they

know to do that?

WADE: We've done it in the past as a part of my process

corrections. I would normally neutralize residue

before they have a tanker truck pump out . . .

KREDER: Who did that?

WADE: It would have been the maintenance plumbers that

actually did carry out the work. I don't know if Mike Crayling authorized it or if it was authorized on third

shift personnel.

CLARK: But this was done after the spill was discovered, is

that correct?

WADE: I understand it was done after the spill was

discovered.

KREDER: Where was this hole in relations to the remaining

fluids in this sump. Were they at the edge of the water? The edge of the liquid? Where was the hole in

the sump?

WADE: The hole in the sump was near the western edge of the

sump approximately near, in between Tanks 138 and Tank

137.

KREDER: Had you seen that hole before?

WADE: No. Other than, I first discovered it on tank on December 31st as part of my investigation. After I got

the flashlight, I noticed the liquid was spilling out into the sump, actually on both sumps. Pured has actually spilled on both sides of the one berm that's adjoining Tank 140, and it was still flowing past Tank

140 towards Tank 138, and I at that time followed it and periodically was taking PH strips which were continually, you know, giving me an almost neutral readings. I'm saying that I should clarify it between 5 and 7 PH. At that point, after I went past Tank 130,

I went and squeezed by the tank and the actual support beams that were there. I discovered that liquid was flowing into a hole which I viewed with a flashlight, and I at that time went back and discussed that with

the maintenance people. I believe that was Mike Crayling, that we have a hole here. That instead of

having it being trucked out for the other supposition, I heard earlier that morning was that maybe it went down the, you know, sewer that we have a gate valve there and somebody was saying hey maybe it went down the sewer which . . .

KREDER: Could it have?

WADE: It would have if somehow the gate valve was open.

KREDER: Was it open?

WADE: When I observed that area on December 31st, the gate valve was in the closed position and the liquid was actually flowing past the gate valve to the actual hole, so my assumption was that that information was maybe erroneous.

KREDER: Is it your feeling that that liquid did not go to City sewer, that spill?

WADE: Later on I believe it was about a month later, we discovered the sump was not filling up. Normally, in a two week period the sump would fill up to a point where we had it disposed of the material in the sump.

CLARK: How high in a two week period would it fill up before you would dispose of it on a routine?

WADE: You probably normally get 5,000 - 6,000 gallons in a couple week period . . .

CLARK: (Unintelligible) a month after this incident?

WADE: A month after it. Hey we still, it wasn't rising, so what we found was that it was a crack that wasn't really visible to the eye. We actually had to use dipenitrant techniques to find that where the acid, in my belief, etched the concrete between the concrete and the plate where there was a minor, you know, leak that went to the sewer system.

KREDER: How would it get into the sewer system?

WADE: Okay, the Tank 138 where the drain is has a, the drain is bounded by concrete, and there is a metal plate that disensed the concrete which had been sealed that protects the, you know, the drain from the liquid entering there.

KREDER: Is that drain to the sewer?

WADE: Through the sewer. In my belief is that the acid ate away some of the concrete, you know, next to the plate where it actually formed a small crack where it was actually flowing slowly to the sewer.

KREDER: Is this on the side of the berm or on the floor of the berm?

WADE: This was more on the side of the, maybe I should have a, sort of like a little picture here, I'll try to draw a little picture, this is a . . .

KREDER: So it was actually leaking there at that plate?

WADE: At that plate.

KREDER: Is that plate normally submerged?

WADE: That plate would protect the sewer normally from liquid, normally would have maybe two four inches of liquid there that it would protect from . . .

KREDER: So it's normally submerged?

WADE: It's not completely submerged. It would easily be stopping the liquid from going to the, entering into the sewer system.

KREDER: If the level came up and it leaked, it went to the sewer?

WADE: In that we had a, the actual plate is higher than the actual berm around the, excuse me . . .

KREDER: Is the plate higher than the top of the sump berm?

WADE: The plate is actually higher than the rest of the berm around the drain, the sewer drain.

KREDER: Then how could it go to it then. Where would it drain?

Is the berm around the, that drain, is that lower than the berm around the sump?

WADE: Yes.

KREDER: So it wouldn't overflow the exterior of the sump, but it would overflow the berm that's protecting it's plate (Unintelligible)?

WADE: It has in the past, yes.

KREDER: How many times has that happened in the past?

This has happened several times a year in the past, WADE: we've had to report to the City on several cases wh

has as a result of the spills . . .

Is there any kind of a safety valve over this sewer sandpipe that's within that, or is that whole area, CLARK: once it makes it over that berm, it goes right dire to the sewer?

In some cases, we've be It would go uhm to a pipe. able to plug that pipe, you know, prior to it reach WADE: it there are other cases we've had to go and notify City we had x amount of PBM chrome that entered the sewer system at that particular point.

Okay, moving away from that particular CLARK: (Unintelligible), I presume that some corrective at was taken (Unintelligible)?

They've actually put a, I gu Yes that was sealed. WADE: some type of plastic or tar along that whole area thoroughly seal it and then did a more peneture te verify that they did indeed seal it.

If you could take a look at this one sheet here, t CLARK: is marked 00804. This is a Quality Verification T Request Report. I notice your name is on it.

I was the one that initiated this test, and WADE: observing one of my observations at the scene on December 31st was this liquid was entering this ho and it didn't appear to be puddling, it was going, I observed it entering this hole it was probably c you know, as fast as you would normally fill up yo bathtub. It was a fair flow in my opinion, and I thinking, hey this is, my opinion was 12,000 gallo disappearing into the subsoil that quickly, you kn where is it going?

It was a good percolation (Unintelligible). CLARK:

A good percolation right, so I thought, uh oh whe: WADE: it going, is it entering the sewer? Is it, we have electrical vault that was maybe 25-30 feet away. somehow entering that electrical vault? We have steam tunnel that bisects the Building 75 underne the sump. I thought several areas that maybe it have been flowing through, and after I observed t hole, one of my concerns was hey where is this li going to? To me my first thought was I don't thi percolation was completely accounting for all the liquid going down that quickly. My viewpoint was 12,000 gallons in a day or less than a day going down a hole that's a foot by maybe a 6-8 inches in length in area, that to me looked like quite a fast . . .

KREDER: So what did you discover?

WADE: So part of my activities was I had maintenance people, first I checked the sewer system. I did a check both underneath Tank 138 where it actually had the discharge to the sewer, the point source where the rinse waters discharge and that gave me a almost a neutral 5-7 PH. I checked out to the main outside Building 75. We have

a manhole, checked that as well . . .

KREDER: Is that sewer or storm drain?

WADE: That's sewer.

KREDER: Alright.

WADE: Even though it has a storm drain cover on it, it is the

sewer system.

KREDER: Okay. What did you find there?

WADE: It was a neutral PH as well. I had . . .

CLARK: (Unintelligible) checked it often?

WADE: I would check that periodically, as well as our chem

lab would normally do a monthly check at that

particular . . .

KREDER: Then what did you check?

WADE: I checked, we also had a penetrant system. I might have the sequence slightly out of things, I going to

just reiterate the items I've checked. I've checked the penetrant system which is adjoining that particular

area at that particular time. We have a water

discharge area. I checked the discharge which would normally go to the sewer as well and it was neutral.

had the maintenance people lift up a cover to a electrical vault that adjoins the sump there and basically put down a PH paper on a wire and the minor amount of liquid there was maybe a little layer of liquid down at the bottom of the pit there, you know, 10-15 feet down and it was almost neutral as well.

Next stop was because of the, we had an incident I guess back in '87 where we had liquid entered the steam tunnel, there was a fair amount of liquid in the steam tunnel at that particular time, there was maybe 4 feet

of liquid in there.

4 feet deep? KREDER:

4 feet deep it would be my estimate. WADE:

Is that normal? KREDER:

It has occurred in the past. It basically gave me WADE:

neutral PH as well.

That was in 1987 or that was on this date? KREDER:

That was on December 31st. WADE:

So on December 31, 1989, there was about 4 feet of KREDER:

liquid in the sewer sump?

There was normally like a, there steam lines WADE:

leak and they get condensate that builds up in tha

particular area.

But that was almost neutral when you (Unintelligib CLARK:

What was the PH? KREDER:

It was between 5-7. WADE:

(Unintelligible)

That's the same reading you had on the PH level o KREDER:

sump that had been neutralized with sodium bicarb

is that correct?

I just basically had It was approximately there. WADE:

strips which in my opinion they can only give you accurate within bout maybe 1 PH unit. So it's

basically a spot check . . .

But it was close to the same . . . KREDER:

It was close to the tap water would be almost the WADE:

as well so.

Did it appear to be the same color or consistency CLARK:

What was it (Unintelligible)?

It was in essence clear, and in my opinion, WADE:

had the, subliquid had gotten in there, It would been more of a yellowish tint because the last t

had prior to, you know, the leak of the sump I h

maybe close to 500 PBM chrome in the sump and I had sentiment containing chrome and lead in there. So I would think I would have a more of a merky yellow color if I did have any . . .

KREDER: Okay, so you moved on from the steam tunnel to where next?

WADE:

After the steam tunnel, I just inadvertently thought well, where could this, I still thought hey, you know, that's still quite a high percolation rate and with my experience with the facility's maps on some of the buildings you have abandoned pipelines, wherein other buildings occasionally instead of ripping everything out, they just cover up pre-existing pipelines. So thought well I hope there isn't anything there that if there was a pipeline that had pre-existing and maybe they'll show on the maps I'm normally used to or been bandoned, maybe we could have had something go to the storm drain. I better go check it. And when I initially checked the storm drain outside Bldg. 75, I believe it's on one of the maps that I gave our legal people, it's marked A8. I can further elaborate on I initially got a low PH. that little bit later.

CLARK: Is this the sample?

WADE: This is not the initial . . .

UNKNOWN: (Unintelligible)

WADE:

On this particular 2BTRR, I indicate I did take a test strip PH at I quess 3:15 which indicate I had a PH of 0 to 1 which made me uh oh maybe I found where some of this material went to was my though at that particular And so with that, a PH strip is not too accurate in my opinion. So at that particular time I went back to maintenance and being maybe 3:30, after I talked to I believe it was Gene Reynolds who was the second shift maintenance person that just came on duty. I had his people pull the grading to that particular storm drain area so I could, I think one of the reasons was to get a better sample. The other item was as part of my conversation with Gene Reynolds, you know, he basically, maintenance previously that morning, December 31st, had called the environmental resource people which apparently did notify a lot of the agencies and because this was a new finding, Gene Reynolds recommended, hey I talked to Jerry Hardicker and I did give Jerry a call. Gene Reynolds looked up the phone number for myself and I gave a call to him at home telling him hey, you know, we had this hole here

where the acid actually apparently ate or somehow entered into the ground or whatever, as well as I got an acid reading in the storm drain and that I tested these others sites and ended up having a almost neutral. And at that particular time, he told me to have the maintenance people arrange to have a tanker truck come in and pump the storm drain system which maintenance did do on December 31st.

CLARK: Do you know how much material they removed out of the storm drains?

WADE: I would suspect it was maybe a 1,000 or 2 gallons. I don't think it was . . .

CLARK: How big are the storm drains?

WADE: The storm drain, in my opinion I don't know, have precise numbers, these are just my ballpark idea. It basically is maybe 15 feet down and the top is actually narrower than the bottom area of this particular storm drain, and it's maybe 4 feet by 4 feet in width. I think the actual hole or pit there maybe has maybe 500 gallons or so capacity (Unintelligible).

CLARK: Could you see how when you went and took the sample there and/or tested it, could you see how full it was?

WADE: It was maybe half to a third way up to one of the adjoining pipes at the bottom of the storm drain so . .

CLARK: It had a fluid then exiting through that pipe? (Unintelligible)

WADE: I observed no flow at that, you know, when I . . .

KREDER: Was it a sump that's there in the storm drain, is that where it is? (Unintelligible) If it was a storm drain why wouldn't it be flowing?

WADE: Why wouldn't it be flowing? Well this particular storm drain is unique to Convair. So my opinion was that if the acid did get in there, I didn't observe any appreciable flow. I could have had some flow, but I didn't observe it . . .

CLARK: Do you where the exit is on that particular storm drain?

As a result of looking at some of the facility maps, joins a I think a 60 inch line that goes to the Conv WADE: It was a final exiting point.

Lagoon.

Did you do any testing at the Convair to Uh hum. CLARK:

Lagoon?

Uh . . . WADE:

Were you aware of any testing being done? UNKNOWN:

We did not do any testing. A previous incident bac 187, where we had a some material that entered in WADE:

essence this same line from a different point sourc that entered the same 60 inch line via another man hole, we actually went down to Plant 19 to the Conv Lagoon area where we actually learned that the exit the Convair Lagoon is maybe 10-15 feet into the wat and we had a lab that came down there and we found we couldn't take a proper sample from that particul So . . .

point back in '87.

Underneath the grate in the storm drain that you have maintenance remove that goes into the storm drain KREDER:

system eventually, is there a sump there?

There's like a pit in my opinion, and so much liqu allowed to gather there before it rises to the lev WADE: where it actually gets into a pipe system where it

drains.

Was that liquid a yellowish color like you expects KREDER:

to be?

I didn't really expect it. I just basically was WADE:

Was it? KREDER:

It was a, second, it was not clear, it was more o . WADE:

yellowish brown, was a . .

Where did you suspect that that material came fro CLARK:

you have any idea where that material came . . .

I, because of the low PH, I suspected it could ha been, you know, a result of the stuff. I suspect WADE: maybe they had a abandoned pipeline that maybe wa

that area and that maybe ate into the pipeline a: pipeline had been broken in the past and it ente you know, into one of the connections and flowed

there, but . . .

KREDER: Where else was it, where did it come from?

WADE: That was my supposition at that particular time.

CLARK: To other people, since you've discovered this, do further examination and draw any other conclusions

other than that?

WADE: Uh, I basically presented that information to our

environmental resource people. We could not, as part of my investigation, I sort of didn't believe, a lot of the maintenance people said hey, you know, lets pump the way, pumped out, it was, excuse me, entered the sewer. I didn't find that much evidence that that was indeed the case. They apparently pump out some of the neutralized material they put into a Baker tank, but, you know, 5,000 gallons of dilute stuff doesn't represent the 12,000, 13,000 gallons plus the 5,000 gallons of other liquid we had in the sump. So to me, my opinion was hey we had, you know, at least 12,000 gallons of material that was unaccounted for.

KREDER: What was your final (Unintelligible)?

WADE: My final, uh, I basically in reviewing some of the

facility maps made a false judgment. I thought we had a abandoned line. I basically was a actually because of these maps are maybe 3 feet in length and several feet wide, I had been further reducing the material these on a xerox machine and made view graphs where I could superimpose the stuffs. And in that process, I thought I had a maybe abandon line that was right adjacent to the sewer line, you know, parallel to. What turned out was it was looking at the sewer line that I somehow had transposed in my xerox process, and

later on I guess it was a week later, I found I made a booboo, uh oh, my idea here is wrong. I did a reanalysis, uh oh, there's no line there. I got the

same maps and redid the process a little bit more

exactingly.

CLARK: So what final conclusions have you reached in terms of

(Unintelligible)?

WADE: In my opinion, this is my opinion, I know the

environmental resource people had a outside contract firm do further testing. In my opinion, based on the lab analysis, I think there was probably some of the material somehow entered into the storm drain system. I think there was another supposition that maybe during the filling process we had some nydrichydrofloric acid that had inadvertently spilled, but I'll tell you guys as well as I told our in-house people that to me, it's hard to imagine that the same, the nitrates, the fluorides, and the heavy metals being approximately ratio, you know even maybe 1,000 to 1 of what I would invision the spill being. I'm just saying it will be hard, well it could be, it is the probability of having you know, sort of the same type of ratio, ballpark ratios of the . . .

CLARK: In the path that it took to get from the processing sump area to the storm drain?

WADE: We could not find any direct END OF TAPE SIDE B.

KREDER: All right, we should be back on tape, we ran out, placed a new tape, we're continuing on, it's 10:01

CLARK: Okay, so uh, where we left off, that was the uh, the could not draw a conclusion as to a direct path fro processing area to the uh, storm drain...

WADE: Storm drain.

CLARK: ...area, but it's your opinion that the materia found uh, which you tested in the storm drain consistent with the material that was...

WADE: A diluted...

CLARK: ...a diluted material. And what was the final Ph. that was found there in the storm drain area?

WADE: Okay, I initially found a very low, just with, with Ph. drips a very low Ph. ya know, zero to one althat's inaccurate, I would say...

CLARK: Then later testing showed...

WADE: ...I had a Ph. of 3.1...

CLARK: Uh, huh.

WADE: ...and that was almost uh, taken an hour later.

CLARK: Uh, huh.

WADE: And uh, further chemical analysis indicated fluorides, nitrates, approximately of the uh, opinion maybe a thousand to one of what the actua would normally hold, as well as some of the heavy that would normally be present in the actual sediment or in liquid, so...

KREDER: So you're saying that, that you feel that this stunct go to storm drain?

WADE:

I, my opinion was uh, my opinion was that some somehow maybe entered it, I could not, from the I saw as far as facility maps, draw a direct ya knoto the actual line where I found the...

CLARK: So, some of it got in there but you don't know how there?

WADE: Right. In my opinion, ya know, it could have so but to me it was uh, against probability, excuse that you would have the fluorides and nitrates heavy metals consistent with uh, that particular

so...

KREDER: We eliminated the sewer system?

WADE: I believe, uh, that the sewer system was pa

CLARK: Due to that crack...

WADE: ...due to that crack.

CLARK: ... found later so, it would be fair to say that s it may have been lost due to the crack that was underneath tank, was it 138? WADE:

138.

CLARK: And then some of it somehow, in your opinion, go the processing area to the, to the uh...

WADE: To the storm drain, from which I took the samples. CLARK:

...storm drain, which we thought was, about how ful

WADE: I would estimate that we maybe had 500 maybe gallons, they did have a...

CLARK: And it was at a level where it would uh, go out a over pipe into the lagoon or was it below that leve WADE:

I...

CLARK: Could you tell?

WADE: ...was a pit full.

KREDER: Was it to the bottom of the pipe?

WADE: It was going into the pipe, they, later that even they pumped out, had a tanker truck come in and pump 1 particular sump. CLARK:

And then the lagoon, the Convair lagoon, where does t uh, material that enters the Convair lagoon, where d WADE:

Where does that go?

CLARK: Yeah.

WADE: That actually enters subsurface I believe into the ba KREDER:

That sump area was full and it was at least draining ir the pipe that eventually led to the...

WADE: It looked, appeared to be.

KREDER: Did you see any flowing at all?

WADE: I did not see any flowing at all.

KREDER: Could you have seen it if it was, if it was flowing?

WADE: I, in my opinion, could venture to say that if it was a high flow rate I maybe would be able to see it, but I could've had a, ya know, several gallons per minute that would have been obscured because...

KREDER: One of the very first reports that we showed you, you mentioned that there was a possibility of liquids uh, going from that sump area to the city drain systems. Do you remember that report?

WADE: Yes.

KREDER: Okay, we had talked about the sewer as a possibility. How could it get to the storm drain as, does that include the city drain system, does that include the sewer system?

WADE: No.

KREDER: What is it? Is that the direct storm drain system?

WADE: No. The...

KREDER: What drain system is that?

WADE: Excuse me, the report that you're mentioning there was a report where safety, uh several groups were, had investigated a series of problems that we had in building 75, one of them of the items there, was that the berm that surrounds the tank 138, uh, sewer discharge is not high enough to preclude liquid from the sump over flowing the ...UNINTELLIGIBLE... into the uh, sewer drain.

CLARK: Was that a process corrected?

WADE: Uh?

CLARK: Was that process, was the ...UNINTELLIGIBLE... raised?

WADE: No it has not.

KREDER: All right, does that statement, maybe I'm being confused here. The city drain system is referred to in that report.

WADE: Yes.

KREDER: Does that include the sewer system?

WADE: That's a sewer system.

KREDER: Has nothing to do with the storm drain?

WADE: Has nothing to do with the storm drain system.

KREDER: So when you say drain system you are referring st

to the city sewer.

wade: I was referring to the sewer system. Uh, excumaybe I better reiterate. Uh, I believe, I several years back, but I also at that particular ya know that report was being generated, we did spill where we both had a sewer discharge of either sewer drain which we basically plugged, ya know after the plugging was known and the plugging was kno

spill, and as a result of the plugging, ya kno basically precluded any further material going sewer system. But, unbeknownst to us, uh, ya kno basically turned off the rinse waters and ever else, but unbeknownst to us at that time the department did a weekly or whatever sprinkler test, which pumped in uh, or basically flow thousands of gallons which actually over flowed the sump and some of it ran down to a, a storm drain could have been talking about the actual outer swell, being that we need to have better uh, con

such as a Ph. or chrome type of test device. And

that recommendation, I even recommended equipmentat was never implemented.

CLARK: And this was done back in 1987.

WADE: Right.

CLARK: This was discussed and uh, those changes hadn't o

to date.

WADE: Right.

CLARK: Uh, you had mentioned that you, one of the reason

you had come back was because the test resul bringing that tank that your bringing back on lin up to spec, was there uh, was time of the esse terms of maintaining those processing tanks, or

able to maintain production for the company?

WADE: Uh, we were scheduled to have those tanks up by 2nd was when they, ya know, operations come back a a.m. uh, January 2nd, ya know, I was to have th

up. So I basically was trying to do my duty, y

as a process control engineer to the best of my abili to insure the tanks were in spec and try to meet timeline that we had previously agreed to.

Is it, would be uh, is it very important to meet CLARK: timeline?

Yeah, I uh, in the past as a result of this partic instance, we were not able to accommodate that thir think we had uh, a week and a half later that we WADE: actually able to do the actual repairs on the tank then bring the system back on line.

Well, for them to call you at home saying that the results uh, came after there wasn't a... KREDER:

I, that was... WADE:

... for balance, excuse me, it was pretty importan you to come down in the middle of the day, or at KREDER: your day off, to come down and make certain that the ready for the January 2nd work day. Isn't it a ! important part if ...

Yes. WADE:

• • - ••,

...you are watching to make certain that tank is KREDER: to use?

Yes, I, I basically had it arranged with our ch that they come during their vacation period to WADE: It was also arranged that ya know operations and plant services that we had basic schedule.

With the schedule in terms of the whole, that CLARK: processing...

The whole activity. WADE:

... the whole activity, it's important to mainta operation ongoing on a continual basis. CLARK:

WADE:

To shut it down for a month would be... Right. CLARK:

Would not be able to produce the hardware which everybody our paychecks, so that's... WADE:

I don't have any more questions at this okay. CLARK:

I'd like to end this, we should have started, b you spell your first name for me? KREDER:

WADE: Steven, S-T-E-V-E-N. KREDER:

And your middle name? WADE:

D-W-I-G-H-T.

KREDER: And what's your date of birth, Steve? WADE:

11-26-1952.

KREDER: And where do you live? WADE:

I live in San Diego, California. KREDER:

Could I have your address and phone number there WADE:

Uh, 2722 Casey Street, California 92139 zip. KREDER:

And what's your home phone? WADE:

472-0835.

KREDER: And your work address? WADE:

Uh, is that, 3002 Pacific Highway, I believe. Convair, General Dynamics Convair Lindbergh Field it's on Pacific Highway, I believe it's... KREDER:

Do you have a phone there? WADE:

Yes, my phone number is 542-7778. KREDER:

I have nothing further, do either Joe or Bob? 10:12 a.m., we'll conclude this interview. It is

# END OF INTERVIEW

## Solution Contal.

Him sum Dear dize tanks, the Aluminium Acid Etch, tanks 34 /2.

And the armic Acid Anadize Seal tank 158 were disposed of reduce
and the armic Acid Anadize Seal tank 158 were disposed of reduce
and perfied to be in compliance to Mis 1-02001-01. The Humpinus
contents on Dec 30-71 trong through a teak in the stell
PK linners, the clid PK sett Instituted cracks which again
allowed the acid content to est away the steel structural
support condition were ended that the home the
not replaced. The steel support to the tank where the
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temperary high september were released to alke begins
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# Hasardon Haterial/wate

Con Dec 31, 1969 the Himinim teid inton, and the was decarated to have loss of its contents to agministration of the tank showed that it leaked out of both the East livest Ends of the tank showed stays a line acid had eaten a 2 of hade in the sump near taysh 13 which allowed the acid & sumo content (5000 gals of contamination water I to drain into the subsoil. Analysis of adjoining sewer ponetrant and electrical vaut content were negative to acid intial acid, readings as well as Flourides Mitrates theavy was give to (ERM) Environmental Resource Management.

EMM notified appropriate local tregional authorities on Dec 31, 1909. A fective care is to have test hales for analysis written reports.

Submitted time 1909.

000329

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	> she	K	HOLIDAY SHUTDO	MH TANK TARKS \$5	13K reda	eral \$3/gal	
DATE	TANK #	START TIME	TASK DESCRIPTION	VENDOR REQUIREMENTS	STATUS	HOLDING TANKS	MANPONER
12/22/89	<b>3</b>		PUMP OUT SOLUTION, STORE IN BAKER TANK, MEUTRALIE	. ,	PA	1	2 PLOMBERS 4 BRS
12/22/89 12/23/89	140	1 him area	TRANSFER SOLUTION, NEUTRALIZE	1 KYNAR TANKER	PA	3	2 PLUMBERS 6 HRS (3 HRS. OT)
12/23/89	/ <u>5</u> 01	4 09:00	PUMP NEUTRAL SOLUTION	1 STAINLESS TANKER	.PO[4400-]	027 0_	2 PLUMBERS 3 HRS.
12/22/89	20'00	• • • • •	TRANSPER TO HOLDING TANKS AND PLT 19  MIKE Kreyling	1 BLK IRON TANKER	POJ ·	<b>≙2</b>	1 PLUMBER OR MECHANIC 8 HRS.
12/27/89	140 V HOLDING	07:00	PUMP SOLUTION FROM BAKER TANKS INTO TANKERS.	4 KYNAR LINED TANKERS	PO# 4394-1011	0	2 PLUMBERS 4 BRS OT
12/28/89 check mat	138 V 12mK3	07100 АН	PUMP OUT SOLUTION INTO TANKERS AND RECUARGE TANK.	3 KYMAR LINED TANKERS	PO# 4394-1012	0	4 PLUMBERS 8 ERS OT
12/29/89	<sup> </sup> 3	07:00 fill to working	RECHARGE TANK 3	монв	W/A	0	2 PLUMBERS 6 HRS
12/31/89	140	07:00	RECHARGE TANK 146	MONB	<u>,</u> `₩/X	0	4 PLUMBERS 8-12 HRS. OT
7,	20' QQ	۲.	RETURN SOLUTION TO TANK	1 BLK IRON TANKER	POI	0	1 PLUMBER OR MECHANIC 8 HRS. OT
12/24/89 12/24/89	RIGGERS A	RE REQUIRED TO P	ULL PLENUMS ON TANK 13 AT ULL PLENUMS ON TANK 13 AT PO	D REPLACE THE PLENUM ON	12/26/89 12/26/89	START 07:00 Å	

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#### **GENERAL DYNAMICS CONVAIR DIVISION**

TANKS 140 AND 3 REFURBISHMENT 1989

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PUMP AND NEUTRALIZE T-38 4hrs	10001											
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certify 713843/146

Afternoon

have info Dec 24-26

#### INTEROFFICE MEMORANDUM

Date: From: 18-Nov-1989 08:57am PST Michael G. Wolske CV/LF

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Michael 0

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250-2

Dept: Tel No:

TO: See Below

Subject: FACILITY PROJECTS, SLDG. 75

PLANT SERVICES PLANS TO COMPLETE SEVERAL PROJECTS IN BUILDING 75 OVER THE THANKSETVING HOLIDAYS. THEY WILL INCLUDE THE INSTALLATION OF A NEW HEATING AND COOLING SYSTEM FOR TANK #133 "SULFURIC ACID ANODIZE" AND SCHEDULED MAINTENANCE ON TANK #135 "CHOMIC ACID ANODIZE RINSE" AND TANK #138 "ALUMINUM DEOXIDIZER".

TO COMPLETE THESE (ASKS WILL PEQUIRS AN INTERPLIPTION OF PRODUCTION PROCESSING FROM 2200 HOURS ON WEDNESDAY 22-NOV-89 THROUGH 0700 HOURS ON MUNDAY 27-NOV-89.

THIS IS THE SECOND NOTICE REGARDING THE ABOVE MENTIONED PLANS (REF. STEVEN WADE'S EMOS DATED 10-OCT-89). IF THERE ARE ANY QUESTIONS REGARDING THESE PLANS PLEASE CONTACT MYSELF AT EXT. 28443. OR BILL CARPENTER AT EXT. 28265.

MICHAEL WOLSKE GENERAL SUPERVISOR NEW CONSTRUCTION

#### Distributions

Terry L. Leek CV/LF ( LEEK.TL ) TO: BILL GLENZER ( LEEK,TL ) TO: Donnelly E. Kolesan CV/KM Dick Leonard - CV/LF ( KOLESAR, DE ) TO: ( LEONARD.RD ) Bill Carpenter CV/LF, TO: ( CARPENTER.WC ) TO: MIKE KREYLING ( LEONARD.RD ) RAM PANJABI TO: ( STUCKTON.DJ ) Nick Nicolet CV/LF TO: ( MICOLET,N ) STEVE LASS TO: ( PAPER MAIL ) KEITH DE ARMOND TO: ( NICULET,N ) TO: STEVEN WADE ( SYCAMORE ) CC: David C. Snyder CV/KM ( SNYDER.DC ) CC: Jim Macoubray EV/LF ( MACQUERAY.JG )

#### INTEROFFICE MEMORANDUM

Date:

10-0ct-1989 01:54om AsT

From:

SYCAMORE CV/OY

SYCAMORE

311-0

Dept: Tel No:

749-7827

TO: See beiow

Subject: Revised Holiday Shut Down Schedule

The previous schedule for the holiday processing shut down on tanks BO4 & 125 described in EMOS sent on 27-Jul-1989 and 03 Aug-89 by the undersigned needs to be modified. This is due to Cruise Missile Wang Production schedule change to support the Imperial Valley Plan and New Construction's need to schedule tank modification tasks for two different periods: ref. EMDS's on OCT 5 by Joy Stockton, Sect 27 by Bob Beneventi and conversations with Mike Wolski. As these are budgeved on 1986 LARS, please be aware that these tasks must be completed this year or finance will cancel the funding. Also, please note that several of the Chemicals and contractors activities will need to be rescheduled.

The schedule below will accomplish several facility improvements on Tanks 120. 133 & 304, periodic clean outs of acid etch Tanks 3 & 140. evaluare/ centify non-chromated cleaner on Tank 304 and repair tank 135; while minimizing process down time. The facility improvements are under CAR # 86-022 item #14, CAR # 86-029 item #7, CAR # 86-029 item #1 for the FML Acid Etch Tank #304; Sulfuric Acid Amodize. Tank 133 and Chromic Acid Anodize Seal. Tank 128 respectively. The improvements are replacement of the FPL ficid Each lead liner, installation of both heating /cooling capacity on the Sulfuric Acid Anodize. installation of a filtration system on the Chromic Acid Anodize Seal tank and repair of spray rinse collar on tank 135. Periodic clean outs are needed on Acid Etch tanks to orevent build up of Aluminium Fluoride precipitate which limits the tank's capacity. The evaluation / certification of mon-enromated cleaners is in support of GD's corporate goal of eliminating targeted hazardous materials (such as chromium) and reduce the size of the Hazardous Waste treatment plant.

\*\*\*\*\*\*\*\*THANKSGIVING HOLIDAY NOV 17-28 (TANKS 304, 133 & 135 )\*\*\*\*\*\*\*\*\*

Chromic Acid Anocize Seal. Tank 128 (CAR 86-029 item #1)

Day Cate iime Process

Responsibility

Nov. 21 10:00PM Shut down tank 128 & cool

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Medicines dus 1454 (00) frankten of +129 contents to 2

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•	Thursday	Nov 23	;	install burd and filtration system	259-1
~	friday	Nov 24	?		. " "
•	Saturday	Nov 25	7	D 4	4 41
· ^	Sunday	Nov 26	?	ч .	
; ^	Monday	Nev 27	?	Transfer solution to tank 128 & verify solution concentrations	253-3,355-0 633-5
ń	5	ulfuric (	Acid Aned	ize. Tard. 133 ( CAR 86-029 Item #7 )	•
6	•	Daté		Process	Responsibility •
Ĉ	Wednesdây	Nov 22	? .	Transfer solution to 2 Baker tanks using Kynar / PVC lined transfer to	
fo .	Thursday	Nov 23	?	install new heating / cooling coils Remove old obsolete equipment	
6	Friday	Nov 24	?		, и н
	Saturday	Nov 25	ņ	**	
6	Sunday	Nev 26	?	•	
6	Menday	Nev 27	3	Transfer solution to tank. Add & verification	253-3,355-0 633-5 ●
ā		Chromi	acid An	odize. Tank 135 (MWO's )	•
ō	Friday	Nev 24	?	Drain tank	253-3
	Saturday	Nov 25	?	fix soray collars	253-3
0	Sunday	Nov 26	?	" & Fill tank	253-3
Ö	****	**CHRIST	MAS HOLID	AY DEC 21-30 ( TANKS 136-3 & 140	)**********
0				Need baker to	inks •
ò	•		Alominio	m Acid Etch. Tanks 3 & 140 2 Ky	inar tankers
	ДяА	Dat∈	Tigo on	Procedure	Responsibility
. •	Eniday	Det 🕰	9:000m	Discuss of tank contents, netralize tank contents with sodium bicarbon	e 293-3,355-0 ate
٠.	Saturday	nec 🖘	7500 AM		Ditale Contritor tanks
į <i>G</i>	Sunday	Dec 24	?	•	tank140 .
   a	Monday	Dec 25	?	•	11 12 40
)	Tuesday	Dec 26	?	•	- " "
ن	Wednesday	Dec 27	**	- > tank 3 27	DE: Complete

1:00 pre ACTOS. . .. 🖘 traks 9:00pm tut milihir sum riverioe oneossitate wontrator 🚧 🗷 7:00 AM Early of 1-1-3 tenkiya ( Sunday uec 24 Mender Dec 25 inseqsA Dec 20 -> tank 3 27,28: complet wednesday Dec IV Add cham. tanks Dec le inursday Medain tank liner as required Friday Dec 24 152-3 293-3.355-0 Saturday Dec 30 Add water, chemicals to tanks. verify solution concentration 603-5 FPL ACID ETCH. TANK. 304 (CAA 66-022 1tgm #14) Cancelled Light E 1020 Time ಎೇಎಲ್ಕ≘ esconsibility Friday Dec 15 Deliever P-2 Etch ( Dakite 60-NG 253-3.810 fransfer to bever tamb #2. Li Dec 16 Saturday T : SOPM 019-0.253-3 Shut down tank 304 & cool! ? Transfer solution to Baker tank 1 Sunday Dec 17 253-3 using Kynar / PVC lined transfer truck  $\circ$ ? Monday Dec 18 Phenare tank, remove/coils, etc. 250-2 Tuesday Dec 19 Install lead lines Contractor **Facilities** Wednesday Dec 20 Thursday Dec 21 0 Dec 22 Friday Saturday Dec 23 tank. ikstall coils, etc. 250-2 Atth P-2 Etch Sunday Dec 24 / Verification 253-3,355-0 using Kynar / Pvc lined transfer truck 633-5 Honday Dec 25 CHRISTMAS HOLIDAY Tuesday Dec 26 Certification testing of P-2 etch 355~0,471-0 019 Transfer P-2 Etch to baker\tank 2 & Wednesday Dec 27 253-3,355-0 FPL Acid Etch to tank 304 & 633-5  $\supset$ verification of FoL Acid Etc Thursday Dec Release of FPL Acid Etch 355-0  $\supset$ Dec 29 Friday っ Run test coupons- FPL 355-0,471 019 Please review the above holiday shut down schedule for both departmental and program impact. Please send a representative to meeting on friday Oct. 13. 1989 at 8:00 am in 04 Cent. Rm. Blog 1 Cel 0-39. LF to #15CUS5 and approve proposed changes.

> STEVEN WADE PROCESS CONTROL QUALITY ENGINEERING

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- Sec.

The second

## ACTIVITY REPORT

EMPLOYEE Steven hade	WEEK E	HOING 3/35/8
EMPLOYEE		
= activity	YTITHAUD	HOURS
ACITATIV	\$	
I. MEETINGS - 2. PERSONNEL CERTS		
3. TRAINING 4. SPEC REVIEWS		0.5
4. 37 20 3.00		
SUBJECT: Salution !	rocercing	
SURMARY: Several tranks were boo	ught backing	to spec. Mas
these include the Huminium A	aid Etch tan	<del>(43,</del> C532
A Chamic teid brodis (576)	tank 201, k	aperdegree
	H.L. CS 39	tanke #3
at due to overflower while two	Kachune	intaminated!
anauthorized add.		
P/C monded corrective o	iction to nec	due the wh
probles on them film tuber of	-R's AK 32	20 4, th 3
There were found to be due so that solution didn't drain comp	stituly	1/1
SUBJECT:     a cardo	as Kaloria	1/400
SUMMARY: P/c provided direction	c for clean 4	p+ duporal
8 \$ 704 due to overHouse	vering hat K	nt.
A Bld 75 counter Clark	in excelled	to veriti
source it to beterted E	$CD \xrightarrow{Q/S+I/E/2}$	- o- 1/
strong dala for design	The same	I country
more tanks morder to min	1	Temple
P/C helped to simplify text	preparation	the analy
unpercary tepros the te		
of contents of the some to	into along	WITH ASPENSE
process control text panels	under a Sim	the state of the s
operating conditions. There	Tests will s	1 H - che
dragout, Hop rater and and	centability	of the tree
Lace 1441 2/2-12	- July Property	to ha
DATE SUBMITTED 3/15/327	_ SIGNATURE	
The second secon		

EMPLOYEE China land	WEEK ENDING_8/10/20
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ACTIVITY	QUANTITY	HOURS
1. MEETINGS 2. PERSONNEL CERTS	. 2.	_2±
3. TRAINING 4. SPEC REVIEWS		95%c

SUBJECT:	CENTISIES (	ontrol Act with	£C	
Process control	stepped conneria	I clean/steam	dear operation	•. 
ived to remove d	irtidies, cil on	the ACM At	+_body. Corting	~ <u></u>
due to correction of	concernir, The Att	T. body Cost.ing	ss_havenum	epolls _
cavities which	en har no dry	ing trailities	avaible.	
Pears were sub.	mitted and trave	Ker, have been	licrened to	
been giving a c	lean surfaces	without outer	tral for	
cresion,		7		
Subject -	Solution Control	Activities		
+ 1 1		1 1/ / 1/2 17		
1 20 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1			3, 15, 140,202, 20	
. specification, Lim	its per MOSI-0	2501-001. Thu	us due to	
. ! over tilled tank	SID, tet Leb	Solution analy	cis errors 21, an	rd
. stopped were as	liwited, verified	and have be	een released,.	
11. The ad	bearance of the	Conversion Coa	ted premium st	vic
occerionally	during chemical	processing . I	softed/streak	~
ail contambetic	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Wed you Go	intation of The r	ance.
and from pair	ton the holding	glamps washing	cato parts, the	ت
are now he	ing stroped b	efore use	dumped and cha	7/3
Date ,	rubmitted s/101	les II.	Trade-	
	. 47107			

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73903 Lewis Hornyack 274079 274080 274074 255715 pagles Bank Control 274090 274057 # 303 Norm 0.014 274057 # 303 Norm 0.014 her 51 her 373 Her 2.49 ph 2.49 porm 0.0015 Bld 78 JCX .45x5 +ank 303 2-3

PAGE	ź	40
PAINE		7

		PAGE # 40
SEPTAL NO.	REASON	DISPOSITION
2096	Huminum HKalina Cleaner, Non Silicated overflowedly due to mater filet for from before lunch.  6/29/87 at 2:30pm	1) Allow solution to emporate to normal level. 2) Sampled + analyzed 3) analysis of sample conformed. 4) Removed Staptag 2096 at miller 10:00Amon 07/06/87. Br.S.D. WADE
2017	7/1/27 7115M4	1) tank Ditt Rechanged. 2) solution worked,
e., 2098	tonk 206  tonk 206  titanium acid Etch  P/c not accomplished  HF carcedy at long at Lower Specification at Lower Accomplished + resteted.  7/1/27 2130 pm  tun ned	1) Add accomplished 9/3/87 21 Solution verified to be within spece 3) Stop tag removed 9/4/87  Stern Wade
2099	tank 212  K-Manel Brightener  istermed due to Na, Co. 07  concentration at min. Level  that to be accomplished  before retesting.  7/2/07	1) Solution we was determined unnecessary  3) Slip for disposed usual 9/10/07  3) tank confined of 1/13/07  11/13/87  Lt. Made
2100	tank 125 Alcdini 1500 is stopped due to Mathy centification (DPS 9.45) test failed do not use until protten is revolved	1) Retest data indicated Process & OK. 2) Handling problem suspected.
	7/20/87 4104pm Stire Made	7/31/87 at 2:30 pm Steve Male

#### PRIORITY 6.

#### PINDING

#### RECOMMENDATIONS

Until local exhaust ventilation on Tank No. 144 is upgraded, excess vapors are either trapped in the enclosure or diluted throughout the paint shop by other paint booth exhaust systems or make-up air.

Minimize vapor spillage from the Tank No. 144 enclosure by repair and replacement of aged, broken parts of enclosure doors and flaps.

c. Environmental Resources Management - The following are recommended to prevent or provide an early warning system for hazardous chemical spills. Their implementation will reduce potential risks to Convair employees and help prevent property damage.

# PRIORITY

#### PINDING

#### RECOMMENDATIONS

Processing line spills often occur at frequencies of once per week. These tanks have an extremely limited sump capacity and have previously overflowed into the city drain system. Sump clean-outs are costly.

Supply tank processing line with sump sensors to detect overflow, indicating pH and chrome levels.

2. The processing line spills can be minimized through better administrative controls.

Provide for review of Planned Maintenance Schedules for tank operations to ensure system capabilities.

- (a) Adequacy of checks and frequency of service for corresion to sprinkler heads, coils, ducts, plenums, fans, etc.
- (b) Certify that scrubbers are operational and that their liquid is tested at prescribed intervals to prevent exhaust fan corrosion.
- (c) Review gross structural integrity of outside of the tanks once the sumos are drained.

Comments

2-11-5> When north sump is plagged during a spill clean up, e steam tunnel fills with contaginated water which could inaverdex dechange to sewe storm drain,
this is due to a hole in the sump where a DI pine
enters the steam tunn of through the sump floor near
sump east wall by trunk #442 4743. Also meed to perton
3 or more holes in the samp east wal near tranks
143,139, 9 138 Sphenums top valves to drain if own flow

Bld #2 cooling lines not contained leak could enter I've stand about to fall off

144 & drinking fountain removal ?

Bld 75 Sams needs better containment.
simp mentoring device
stem return nontering device

100 IGG4

# Ventilation problems OSHA requirements 140 phenums broken 142 phenum blocked-vent 143 phenum blocked-vent 136 Anodize saddles no springs on west end 137 Air line break + water Leak near 138 Liner falling off

fill valve

#### RUDNASORSICE MEMORANDUA

Date: 24-mar-1988 10:08am PST From: Faul L. Doty - CV DOTY:PL

301777 310-0

IO: Terry L. Leek - CU

( LESK.IL )

12: Glenn W. Bancroft - CV

( BANCRUFT.GW )

والمعين لينكم فينسوان في المعلم والمعان والمواجع المواجع

::: E. Leland Jacobson - CV

( JACHURON, EL )

3.bject: STOP TAG NOTIFICATION

a limited usage STOP TAG was placed on the Aluminum Acid Etch tank 140 by Quality Assurance Inspection at 12:01 a.m. on 23 March 1986, due to a piece of the PVC liner on one side of the tank preaking away exposing the flexible PVC blacker. The STOP TAG restricted the use of the large paskets, but allowed the use of the small baskets and all tacks.

The exposed PVC liner was temporarily repaired by dainenance before moon on 23 Harch 1988. Process Control had issued written procedures for transfer of the solution to a stainless steel lined tank #139 for interia holding while permanent repairs to tank 140 are being made. Formament repairs are scheduled to start 25 Harch 1988 on second shift and to be completed by the afternoon of 27 Harch 1988. The solution inalysis and verification of the tank will then be conducted by indicess Control and if satisfactory will be released for production use.

For further information contact S. D. Wade at Ext. 27778.

Jack Crackston.

なほうきしゅうとこしぎ マモガロギニハロピャ

Date: 16-Jun-1988 OD:47pm 917 Prom: Paul C. Doty - CV

DCTY.PL Best: 310-0

TO: Ed Keller - EV

( STEASER.SA )

CC: Bill D. Miller - CV

( MILLER, WD )

CC: Steve wade - CV

( CLARK.JM )

Subject: TANK 140 RE-ANALYSIS

7 .

Process Control Quality Encineering will be forced to stop the Building 75. Tank 140 ESSE at five bim. To June 1986 if we do not receive word that the previous analyses were in error. It is suspected that the 10.000 gal, tank did not lose approximately 21 wt. origal. Nitric Acid in one weeks time when no disposal/recharge activity was done. Additionably, the tank has a of less than 0 and etch rate of 4.5 min. to remove 0.0001 inch of 2014 Aluminum Allov per surface. The stoppage of this tank will effect the following processes/programs respectively: Alodine 12005. Alodine 1906. Etch for penetrant. Clean for weld. Enromic Acid Anodize, Sulfuric Acid Anodize, MD-11. ACM. CM. Epsce sho Spares. Please re-shalve tank 140 and inform Steven Wade/Bill Miller. Process Control, of the final results at Ext. 20033 or 27772.

Thank You

. P. L. Daty DE. Process Control

	QUAL	ITY VERIFIC	CATION 1	ΓEST R	EQUES	T/REPO	ORT SE	r. no. 23	85525
JOB SESCEIPTION	Analys	is - Itas	randen	c luc	te			<i>90</i> 00	
- Contamina	fet water	·_	1	15/120	WOR	~ C C 40	D. WAP, L		
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### Manufacturers Beware: Superfund Cleanup Liability May Exist for Products

Jon K. Wactor

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA" or "Superfund") authorizes the government and private parties to expend money to clean up and prevent the discharge of hazardous substances into the environment. The cleanup monies are, pursuant to Section 107 of CERCLA, recoverable from "responsible parties."

"Responsible parties" are defined in the statute as those who arrange for disposal of the hazardous substance, those who owned or operated the facility at the time of disposal, those who owned or operated the facility at the time of cleanup, and those who transported the materials to the disposal site. Product manufacturers in the United States are well aware of the cost recovery provisions of Superfund because they have been targets of government cost recovery actions for cleanups of waste disposal sites.

While the law has become settled on the liability of generators for government response costs at California waste disposal facilities such as the Stringfellow Acid Pits in Glen Avon or the Operating Industries Landfill in Monterey Park, manufacturers have not been routinely held liable for cleanups of "products," as oposed to substances. However, this may be ananging.

A body of case law has been developing since 1982 which holds the manufacturers of raw materials liable for the cleanup of those materials even though they were spilled into the environment by other parties. Of particular interest to manufacturers of raw materials used to formulate pesticides, is *United States v. Aceto Agricultural Chemicals*. In *Aceto*, the EPA sought cost recovery of cleanup funds from a supplier of raw materials whose products had been spilled by a pesticide formulator at the formulating facility.

While the manufacturer of the raw materials argued that it had not "arranged for disposal" and therefore should not be considered a CERCLA responsible party, the court held that because CERCLA was passed in an effort to require the parties who were the cause of pollution to bear the cleanup costs, CERCLA should be construed to hold liable the raw material manufacturer even though it had not technically "arranged for" disposal.

Given the unarguably broad CERCLA definitions of "disposal," "hazardous substance," and "facility," and the Aceto holding, manufacturers of most every product might be reasonably worried about their liability under CERCLA for cleanup of those products. For stance, a manufacturer of pencils might be required oclean up discarded pencils no matter where they

might have landed, because the pencils contain materials listed as CERCLA hazardous substances.

Luckily for manufacturers, CERCLA was not construed in *Aceto* to go quite so far. Two important points in the *Aceto* holding were: (1) The supplier of the raw materials maintained ownership of the materials throughout the formulation process; (2) Spillage of the raw materials was an inherent part of the formulation process. *Aceto* and another pesticide case, *United States v. Velsicol Chemical Corporation*, stand for the proposition that those responsible for problems caused by the release of their chemical products should bear the costs of remedying harmful conditions under CERCLA, especially if they could be liable under common law.

Sellers of products have also been held liable under CERCLA. However, in the particular circumstances where liability was upheld, the sellers sold a product which was hazardous and which the courts characterized as disposal masquerading as a sale. Courts have distinguished such "sham selling" from actual products sales in the case of sellers of transformers which contained mineral oil, which contained PCBs. The manufacturers of the transformers, who sold the transformers in the first instance for use as transformers, were not held liable when many years later, the transformers were disposed of and the PCBs contained in the transformers were spilled into the environment. The courts reasoned that the manufacturers of the transformers had not arranged for the disposal of the PCB fluid inside the transformers.

However, another result would be reached if the transformers had been sold as scrap. One analogous case is *United States v. General Electric* in which General Electric sold waste oil for use as dust suppressant at a drag strip in New York State. The waste oil contained PCBs, and General Electric was aware of the intended use of the waste oil. The court held in that particular circumstance that the application of the oil to the ground for dust suppression purposes was equivalent to arranging for disposal of the PCBs.

If all this seems confusing, it is because this area of law is still developing and no crystal clear definition of "arranged for disposal" has emerged from the courts. What this means to manufacturers and suppliers of raw materials which may contain hazardous substances is that they must be diligent to avoid creating a circumstance in which they might be held liable under CERCLA as a generator of a hazardous substance. The manufacturer or product supplier might take steps to determine whether its customers are using the product in a manner that would contaminate the environment. If contamination is inherent in the process, there is at least a reasonable chance that the EPA may be knocking on the manufacturer's or supplier's door seeking money to clean up environmental contamination resulting from its products.

# GRAY CARY QPENS NORTH COUNTY OFFICE

On April 2, Gray Cary opened an office in Escondido to serve clients in the rapidly growing North County and Temecula areas. The full-service office, directed by partners Douglas H. Barker and David Henry Dolkas, includes attorneys James W. Huston, Joseph D. Mueller and Cathy A. Bencivengo. Our new address, telephone and fax numbers are:

Gray, Cary, Ames & Frye 613 West Valley Parkway, Suite 300 Escondido, California 92025 Telephone: (619) 738-7700 FAX: (619) 738-7710

## Gift Tax Law Update

Annual gifts of \$10,000 or less to individuals are a ...ell-established means of transferring property without incurring gift tax. The gift also avoids estate tax on the property upon one's subsequent death.

The transaction can be a simple and effective one. However, one must watch out for a few traps. And, there are a few clouds on the horizon—under the guise of "tax reform"—as well.

The House Ways and Means Committee is considering further changes to the estate and gift tax laws this spring. Under consideration is a limitation on the number of \$10,000 annual gifts to individuals a person may make in any calendar year. Some changes affecting gifts to trusts may also be considered. If such legislation passes—and its chances are at least conjectural—gifts made prior to a certain date this spring might qualify for treatment under current law. Persons who have the means and the desire to make such gifts might consider making them as soon as possible this year, to "grandfather" those gifts under current law, if the proposed revisions do pass.

Under current law, any individual may make a gift of \$10,000 or less in each calendar year to an unlimited number of other individuals. The property transferred is not treated as income to the recipient. If no gifts in excess of the \$10,000 limitation are made in any calenar year, no gift tax return need be filed.

The value of these gifts is excluded from the taxable estate of the donor for estate tax purposes upon the donor's death—even if the donor dies immediately after making the gift.

With the minimum effective death tax rate at 37% for an estate having a net value over \$600,000—and with the top rate rising to 49% for



William E. Beamer

an estate of \$2,000,000—significant estate taxes can be saved through the relentless use of the \$10,000 gift program. (Under current law, for estates over \$2,500,000, the top rate will vary between 53% and 60%.) Thus, the tax planning advantages of these gifts are clear. For every \$10,000 given away, from \$3,700 to \$6,000 in estate taxes are saved.

Each of us, then, has the opportunity to give \$10.000 to any individual each year. For example, a married couple with two children and four grandchildren could give away \$120,000 each year, just to children and grandchildren.

The gifts can be of cash, securities, interest in real property—just about any asset which a person can own, with a few wrinkles:

- 1. Gifts relating to interests in life insurance are subject to a three-year survivorship rule before being excluded from one's estate.
- 2. Gifts of a "future interest," by which the donee's right to fully use the property is postponed, do not qualify for the \$10,000 exclusion, unless the gift is to a person under age 21 and is carefully structured.
- 3. The IRS has set another trap for those individuals whose assets are held in a revocable living trust. The Service has taken the position that gifts made directly from such a trust are subject to the three-year survivorship rule as well. While most commentators believe that the IRS position is wrong, individuals are advised to take the proposed gift out of the living trust first, and then transfer it to the donee.
- 4. Gifts to children under age 14 which then generate income will not reduce the parents' taxable income to the extent that the child's total unearned income exceeds \$1,000.

On the other hand, direct payment of tuition or direct payment of medical care expenses for a third party are not considered gifts and do not even "use up" the \$10,000 exclusion. In other words, a generous grand-parent could provide for the tuition of a grandchild by making the tuition payments directly to the college or

Continued on page 7